

AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning on page 1, line 14 of the specification with the following amended paragraph:

Face detection is not only used as a first step [[of]] required in face recognition systems, but also used in various applications such as intelligent human-computer interfaces, video monitoring systems, and content-based image search and retrieval by using a face. Although research on face detection has recently increased a lot, the reliability and speed of face detection algorithms is so low that the technology is practically unused.

Please replace the paragraph beginning on page 6, line 3 of the specification with the following amended paragraph:

In operations S310 and S320, the basis vector extractor 110 receives the images stored in the face DB 100 and the near-face DB 105 and extracts basis vectors from the respective images. Referring to FIG. 1B, the basis vector extractor 110 includes a principle component analysis (PCA) basis vector extractor 112 which extract extracts PCA basis vectors by performing PCA on each input image; a first face basis vector DB 114 and a first near-face basis vector DB 115 which store the PCA basis vectors; an independent component analysis (ICA) basis vector extractor 116 which performs ICA on each of the basis vectors received from the first face basis vector DB 114 and the first near-face basis vector DB 115 in order to output ICA basis vectors; and a second face basis vector DB 118 and a second near-face basis vector DB 119 which store the ICA basis vectors.